



SUPPLEMENTAL DATA

PACKAGED L SERIES

# LENNOX HUMIDITROL OPTION

For 036, 048, 060 High Efficiency Models  
 3, 4, 5 Ton (10.6, 14.1, 17.6 kW) Sizes  
 "LCA" Packaged Cooling and Electric Heat  
 "LGA" Packaged Cooling and Gas Heat

Bulletin # 210272  
 (Supplement to #210232)  
 October 1999

## HUMIDITROL FEATURES

- Factory Installed Option Designed to Control Humidity.
- Unit Comes Equipped With 1 Row Reheat Coil, Humidity Sensor, Solenoid Valve and Humidity Controller.
- Provides Dehumidification On Demand.
- Uses ASHRAE 90.1 Recommended Method For Reheat With Comfort Conditioning Humidity Control.

## OPTIONAL ACCESSORIES

Remote Mounted Humidity Sensor Kit (58L33)

- Protects sensor from drafts through wall when remotely located.

## UNIT PERFORMANCE WITH AND WITHOUT HUMIDITROL OPTION

Supply Air Relative Humidity at 76°F (24.4°C) db

NOTE - Use psychometric chart to determine relative humidity at other indoor (space) dry bulb temperatures with the same moisture content as indicated for 76°F (24.4°C).

### LCA/LGA036H

Entering Wet Bulb Temperature	Total Air Volume		Outdoor Air Dry Bulb														
			65°F (18°C)					75°F (24°C)					85°F (29°C)				
			Total Cooling Capacity		Entering Dry Bulb			Total Cooling Capacity		Entering Dry Bulb			Total Cooling Capacity		Entering Dry Bulb		
	cfm	L/s	kBtuh	kW	75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW	75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW	75°F 24°C	80°F 27°C	85°F 29°C
63°F (17°C)	----	----	<b>0</b>	<b>0</b>	<b>50</b>	<b>44</b>	<b>38</b>	<b>0</b>	<b>0</b>	<b>50</b>	<b>44</b>	<b>38</b>	<b>0</b>	<b>0</b>	<b>50</b>	<b>44</b>	<b>38</b>
	1050	495	38.1	11.2	38	38	36	37.0	10.8	39	38	37	35.9	10.5	40	39	37
	1200	565	39.0	11.4	40	39	37	37.9	11.1	41	40	37	36.7	10.8	42	40	38
	1350	635	39.9	11.7	42	41	38	38.7	11.3	43	41	38	37.5	11.0	43	42	38
67°F (19°C)	----	----	<b>0</b>	<b>0</b>	<b>64</b>	<b>58</b>	<b>52</b>	<b>0</b>	<b>0</b>	<b>64</b>	<b>58</b>	<b>52</b>	<b>0</b>	<b>0</b>	<b>64</b>	<b>58</b>	<b>52</b>
	1050	495	40.7	11.9	46	45	44	39.5	11.6	47	45	45	38.3	11.2	47	46	45
	1200	565	41.6	12.2	48	47	46	40.3	11.8	49	48	47	39.0	11.4	50	48	48
	1350	635	42.2	12.4	50	49	48	41.0	12.0	51	50	49	39.7	11.6	52	50	49
71°F (22°C)	----	----	<b>0</b>	<b>0</b>	<b>80</b>	<b>74</b>	<b>68</b>	<b>0</b>	<b>0</b>	<b>80</b>	<b>74</b>	<b>68</b>	<b>0</b>	<b>0</b>	<b>80</b>	<b>74</b>	<b>68</b>
	1050	495	43.5	12.7	55	53	52	42.3	12.4	55	54	53	41.0	12.0	56	55	54
	1200	565	44.4	13.0	57	56	55	43.1	12.6	58	57	56	41.8	12.3	59	58	57
	1350	635	45.1	13.2	60	59	58	43.8	12.8	61	59	58	42.4	12.4	61	60	59

NOTE: **Bold** figures indicate % relative humidity of supply air, not treated by Humiditrol refrigeration option, at 76°F (24.4°C) db with moisture content at indicated dry bulb/wet bulb conditions. Supply air relative humidity should be at least 5% below target indoor relative humidity to offset internally generated latent load.

### LCA/LGA048H

Entering Wet Bulb Temperature	Total Air Volume		Outdoor Air Dry Bulb														
			65°F (18°C)					75°F (24°C)					85°F (29°C)				
			Total Cooling Capacity		Entering Dry Bulb			Total Cooling Capacity		Entering Dry Bulb			Total Cooling Capacity		Entering Dry Bulb		
	cfm	L/s	kBtuh	kW	75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW	75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW	75°F 24°C	80°F 27°C	85°F 29°C
63°F (17°C)	----	----	<b>0</b>	<b>0</b>	<b>50</b>	<b>44</b>	<b>38</b>	<b>0</b>	<b>0</b>	<b>50</b>	<b>44</b>	<b>38</b>	<b>0</b>	<b>0</b>	<b>50</b>	<b>44</b>	<b>38</b>
	1400	660	51.9	15.2	37	36	36	50.5	14.8	37	37	36	47.1	13.8	39	39	37
	1600	755	53.1	15.6	39	39	37	51.7	15.2	40	39	38	48.2	14.1	41	41	38
	1800	850	54.3	15.9	41	41	38	52.8	15.5	42	41	38	49.2	14.4	41	42	38
67°F (19°C)	----	----	<b>0</b>	<b>0</b>	<b>64</b>	<b>58</b>	<b>52</b>	<b>0</b>	<b>0</b>	<b>64</b>	<b>58</b>	<b>52</b>	<b>0</b>	<b>0</b>	<b>64</b>	<b>58</b>	<b>52</b>
	1400	660	55.2	16.2	45	43	42	53.7	15.7	45	44	44	50.0	14.7	47	46	45
	1600	755	56.4	16.5	47	46	45	54.8	16.1	48	47	46	51.0	14.9	49	48	48
	1800	850	57.3	16.8	49	48	47	55.7	16.3	50	49	48	51.8	15.2	51	50	50
71°F (22°C)	----	----	<b>0</b>	<b>0</b>	<b>80</b>	<b>74</b>	<b>68</b>	<b>0</b>	<b>0</b>	<b>80</b>	<b>74</b>	<b>68</b>	<b>0</b>	<b>0</b>	<b>80</b>	<b>74</b>	<b>68</b>
	1400	660	58.9	17.3	53	52	51	57.2	16.8	54	53	52	53.4	15.6	56	55	54
	1600	755	60.0	17.6	56	55	54	58.3	17.1	57	56	55	54.3	15.9	59	57	56
	1800	850	60.9	17.8	59	58	56	59.2	17.3	60	58	57	55.0	16.1	61	60	59

NOTE: **Bold** figures indicate % relative humidity of supply air, not treated by Humiditrol refrigeration option, at 76°F (24.4°C) db with moisture content at indicated dry bulb/wet bulb conditions. Supply air relative humidity should be at least 5% below target indoor relative humidity to offset internally generated latent load.

## UNIT PERFORMANCE WITH AND WITHOUT HUMIDITROL OPTION

Supply Air Relative Humidity at 76°F (24.4°C) db

NOTE - Use psychometric chart to determine relative humidity at other indoor (space) dry bulb temperatures with the same moisture content as indicated for 76°F (24.4°C).

### LCA/LGA060H

Entering Wet Bulb Temperature	Total Air Volume		Outdoor Air Dry Bulb														
			65°F (18°C)					75°F (24°C)					85°F (29°C)				
			Total Cooling Capacity		Entering Dry Bulb			Total Cooling Capacity		Entering Dry Bulb			Total Cooling Capacity		Entering Dry Bulb		
	cfm	L/s	kBtuh	kW	75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW	75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW	75°F 24°C	80°F 27°C	85°F 29°C
63°F (17°C)	----	----	<b>0</b>	<b>0</b>	<b>50</b>	<b>44</b>	<b>38</b>	<b>0</b>	<b>0</b>	<b>50</b>	<b>44</b>	<b>38</b>	<b>0</b>	<b>0</b>	<b>50</b>	<b>44</b>	<b>38</b>
	1750	825	64.5	18.9	38	37	37	62.7	18.4	38	38	37	60.8	17.8	39	39	37
	2000	945	66.0	19.3	40	40	38	64.2	18.8	41	40	38	62.1	18.2	41	41	38
	2250	1060	67.3	19.7	42	41	38	65.4	19.2	42	42	38	63.4	18.6	43	42	38
67°F (19°C)	----	----	<b>0</b>	<b>0</b>	<b>64</b>	<b>58</b>	<b>52</b>	<b>0</b>	<b>0</b>	<b>64</b>	<b>58</b>	<b>52</b>	<b>0</b>	<b>0</b>	<b>64</b>	<b>58</b>	<b>52</b>
	1750	825	68.4	20.0	45	44	44	66.5	19.5	46	45	44	64.4	18.9	47	46	45
	2000	945	69.7	20.4	48	47	47	67.7	19.8	48	47	47	65.5	19.2	49	48	48
	2250	1060	70.7	20.7	50	49	48	68.7	20.1	51	50	49	66.5	19.5	51	50	50
71°F (22°C)	----	----	<b>0</b>	<b>0</b>	<b>80</b>	<b>74</b>	<b>68</b>	<b>0</b>	<b>0</b>	<b>80</b>	<b>74</b>	<b>68</b>	<b>0</b>	<b>0</b>	<b>80</b>	<b>74</b>	<b>68</b>
	1750	825	72.8	21.3	54	53	52	70.7	20.7	55	54	53	68.5	20.1	56	54	54
	2000	945	74.1	21.7	57	56	55	71.9	21.1	58	57	56	69.6	20.4	59	58	56
	2250	1060	75.1	22.0	60	58	57	72.9	21.4	60	59	58	70.5	20.7	61	60	59

NOTE: **Bold** figures indicate % relative humidity of supply air, not treated by Humiditrol refrigeration option, at 76°F (24.4°C) db with moisture content at indicated dry bulb/wet bulb conditions. Supply air relative humidity should be at least 5% below target indoor relative humidity to offset internally generated latent load.

## HUMIDITROL OPTION AIR RESISTANCE

Air Volume		Pressure Drop	
cfm	L/s	in. w.g.	Pa
1000	470	0.04	10
1200	565	0.05	13
1400	660	0.06	16
1600	755	0.08	21
1800	850	0.08	21
2000	945	0.09	21
2200	1040	0.11	27
2400	1135	0.12	31
2600	1225	0.15	38
2800	1320	0.17	42
3000	1415	0.18	46